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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHIN, KYUNG H

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/832,436

Applicant(s)

REYNOLDS ET AL.

Examiner

Kyung H Shin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responding to application papers dated 4/10/2001
2. Claims 1 - 39 are pending. Independent claims are 1, 11, 12, 18, 28, 30.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1 - 5, 9 - 14, 16 - 20, 26, 27, 30 - 34, 36 - 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rangachar et al. (US 6,301,252)** in view of **Chen et al. (US 6,625,590)**.

Regarding Claim 1, Rangachar discloses a method of managing a telecommunications network device, comprising:

- b) receiving the command at the command interface from a user interface; (see col. 4, lines 28-30: command is sent to network manager which is central command processing software)

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- c) forwarding the command to the application; (see col. 5, lines 23-28):
send to process (command proxy) for applicable network device) and
- d) completing execution of the command. (see col. 4, lines 41-47:
process command at network device)

Rangachar discloses a network management system controlling a plurality of managed network devices. (see Rangachar col. 4, lines 7-11: “
... a network manager (sometimes referred to as a network server or a network management station) communicating with a plurality of ... switches connected by communications links ...”)

Rangachar does not specifically disclose the storage (register) of a command within a command interface. However, **Chen** discloses:

- a) registering at least one command executable by an application with a command interface; (see col. 7, lines 55-59: store (register) commands within the command interface, col. 2, lines 59-64)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to store (register) a command for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated to enhance Rangachar in order to provide more graphical and intuitive management of a NMS. (see Chen col. 1, lines 21-24: “*... In an effort to provide more graphical and intuitive management of data communication networks, many network management platforms have adopted menu or icon-based*”)

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interfaces ... ")

Regarding Claim 2, Rangachar discloses the method of claim 1, wherein the command interface is a distributed system comprising a central command daemon and a plurality of distributed command proxies and wherein registering at least one command executable by an application with a command interface comprises:

- a) registering the command with one of the plurality of command proxies that is local to the application; (see col. 5, lines 23-28: network device processes (command proxies) can access commands through distributed network management system) and
- b) registering the command through the command proxy that is local to the application with the central command daemon. (see col. 4, lines 18-27: specific network device process (command proxy) can access commands through distributed network management system)

Regarding Claim 3, Rangachar discloses the method of claim 2, wherein receiving the command at the command interface from a user interface and forwarding the command to the application comprises:

- a) receiving the command at one of the plurality of command proxies that is local to the user interface; (see col. 4, lines 28-30; col. 5, lines 23-28: commands are diverted to central network manager (central command daemon), then command is sent to specific process (command proxy) for the particular network device)

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- b) determining if the application that registered the received command is local to the command proxy that is local to the user interface; (see col. 5, lines 23-28; col. 4, lines 41-47: command is sent to specific process (command proxy) for the particular network device from network manager (central command daemon))
- c) if yes, then forwarding the received command to the application that registered the received command; and if no, then forwarding the received command to the central command daemon. (see col. 4, lines 28-30: forward commands to network manager for command implementation at local process, col. 5, lines 23-28: forward to network device for processing)

Regarding Claim 4, Rangachar discloses the method of claim 3, further comprising:

- a) forwarding the received command to the one of the plurality of command proxies that registered the received command; (see col. 5, lines 23-28: forward to process (command proxy)) and
- b) forwarding the received command to the application that registered the received command. (see col. 4, lines 41-47: forward to network device for processing)

Regarding Claim 5, Rangachar does not specifically disclose the storage (register) of a command within a command interface. **Chen** discloses the method of claim 1, wherein the command interface is a central system and

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wherein registering at least one command executable by an application with a command interface comprises: registering the command with a central command daemon. (see col. 7, lines 55-59: store (register) command in command interface database)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to store (register) a command for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated to enhance Rangachar in order to provide more graphical and intuitive management of a NMS. (see Chen col. 1, lines 21-24)

Regarding Claims 9, 16, 26, 36, Rangachar does not specifically disclose a command line interface. However, **Chen** discloses the method of claim 1, 13, 18, 32, wherein the user interface comprises: a command language interface (CLI). (see col. 1, lines 50-56: command line interface for command input)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to utilize a command line interface for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated to enhance Rangachar in order to enable a flexible and robust user interface for network management control.

Regarding Claims 10, 17, 27, 37, Rangachar discloses the method of claim 1, 13, 18, 32, wherein the user interface comprises: a network/element

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management system interface. (see col. 4, lines 7-11: network management system with management console or station)

Regarding Claim 11, Rangachar discloses a method of managing a telecommunications network device, comprising:

- c) receiving the command at a user interface; (see col. 4, lines 28-30: forward command to network manager (central command processing))
- d) forwarding the command to a second command proxy, wherein the second command proxy is local to the user interface; (see col. 5, lines 23-28: forward command to applicable process (command proxy))
- e) forwarding the command through the second command proxy to the central command daemon; (see col. 4, lines 28-30: forward command to network manager (central command processing))
- f) forwarding the command through the central command daemon to the first command proxy; (see col. 5, lines 23-28: forward command to applicable process (command proxy))
- g) forwarding the command through the first command proxy to the application; (see col. 4, lines 28-30: forward command to network manager (central command processing)) and
- h) completing execution of the command. (see col. 4, lines 41-47: process command at network device)

Rangachar does not specifically disclose the storage (register) of a

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command within a command interface. However, Chen discloses a method of managing a telecommunications network device, comprising:

- a) registering at least one command executable by an application with a first command proxy, wherein the first command proxy is local to the application; (see col. 7, lines 55-59)
- b) registering the command through the first command proxy with a central command daemon; (see col. 7, lines 55-59: store (register) command in command interface database)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to store (register) a command for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated to enhance Rangachar in order to provide more graphical and intuitive management of a NMS. (see Chen col. 1, lines 21-24)

Regarding Claim 12, Rangachar discloses a method of managing a telecommunications network including a first network device and a second network device, comprising:

- a) executing a community command daemon on one of the first or second network devices; (see col. 4, lines 28-30: multiple network devices are managed by network manager (central command daemon))

b) executing a first application on the first network device; executing a second application on the second network device; (see col. 5, lines 23-28: applicable process (command proxy) is executed)

Rangachar does not specifically disclose the storage (register) of a command within a command interface. However, **Chen** discloses a method of managing a telecommunications network including a first network device and a second network device, comprising:

c) registering a first command executable by the first application with a first command interface on the first network device; registering a second command executable by the second application with a second command interface on the second network device; (see col. 7, lines 55-59: store (register) command at command interface) and

d) registering the first and second commands with the community command daemon. (see col. 7, lines 55-59: store (register) command at command interface)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to store (register) a command for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen's in order to provide more graphical and intuitive management of a NMS. (see Chen col. 1, lines 21-24)

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Regarding Claims 13, 14, Rangachar discloses the method of claim 12, further comprising:

- a) receiving the first/second command at the community command daemon from a user interface; (see col. 6, lines 24-26: multiple command interface systems ; col. 4, lines 28-30: network manager (community command daemon))
- b) forwarding the first command through the community command daemon to the first/second command interface; (see col. 5, lines 14-19)
- c) forwarding the first/second command through the first command interface to the first/second application; (see col. 5, lines 23-28) and
- d) completing execution of the first/second command. (see col. 4, lines 41-47: process command at network device)

Regarding Claim 18, Rangachar discloses a telecommunications network device, comprising:

- a) an application capable of executing a command; (see col. 5, lines 23-28: command processes (application) to execute a command)

Rangachar does not specifically disclose a common command interface. However, Chen discloses:

- b) a common command interface, wherein the application is capable of registering the command with the common command interface and the common command interface is capable of receiving the command from a user interface and forwarding the received command to the application. (see col. 7, lines 55-59)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to store (register) a command for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated to enhance with Chen in order to enable a flexible and robust user interface for network management control.

Regarding Claims 19, 20, 38, Rangachar discloses the telecommunications network device of claim 18, 32, wherein the common command interface comprises a distributed system and a central system including:

- a) a central command daemon; (see col. 4, lines 18-22: network manager (central command daemon)) and
- b) a plurality of distributed command proxies. (see col. 4, lines 7-11; col. 5, lines 23-28: processes (command proxies))

Regarding Claim 30, Rangachar discloses a telecommunications network, comprising:

- a) a first network device; (see col. 4, lines 7-11)
- b) a second network device connected to the first network device; (see col. 4, lines 7-11: a plurality of network devices connect by communication links)
- c) a community command daemon executing on the first or second network device; (see col. 4, lines 28-30: network manager (community

command daemon) for executing network management command on a network device) and

Rangachar does not specifically disclose the storage (register) of a command within a command interface. However, **Chen** discloses a telecommunications network, comprising:

d) a first common command interface executing on the first network device and capable of registering a first command with the community command daemon; and a second common command interface executing on the second network device and capable of registering a second command with the community command daemon. (see col. 7, lines 55-59: store (register) commands within a command interface)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to store (register) a command for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated to enhance Rangachar in order to enable a flexible and robust user interface for network management control.

Regarding Claim 31, Rangachar does not specifically disclose the storage (register) of a command within a command interface. However, Chen discloses the telecommunications network of claim 30, further comprising:

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a) a first application executing on the first network device and capable of registering the first command with the first common command interface; and a second application executing on the second network device and capable of registering the second command with the second common command interface. (see col. 7, lines 55-59: store (register) commands within the command interface)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to store (register) a command for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated to enhance Rangachar in order to enable a flexible and robust user interface for network management control.

Regarding Claim 32, Rangachar discloses the telecommunications network of claim 30, further comprising:

- a) a first user interface (see col. 6, lines 24-46: multiple network managers for a first and second command environments) executing on the first network device and capable of sending the first command to the first common command interface, wherein the first common command interface is capable of forwarding the received first command to the first application; (see col. 4, lines 28-30; col. 5, lines 23-28) and
- b) a second user interface executing on the second network device and capable of sending the second command to the second common

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command interface, wherein the second common command interface is capable of forwarding the received second command to the second application. (see col. 4, lines 28-30; col. 5, lines 23-28)

Regarding Claim 33, Rangachar discloses the telecommunications network of claim 32, wherein the first and second user interface comprise the same user interface. (see col. 6, lines 24-46: multiple network managers for a first and second command environments ; see col. 4, lines 7-11: both user interfaces are network management consoles.)

Regarding Claim 34, Rangachar discloses the telecommunications network of claim 32, wherein the first and second user interface comprise different user interfaces. (see col. 6, lines 24-46: multiple network managers for a first and second command environments ; col. 1, lines 50-56: first interface is a network management interface and second interface is a command line interface)

Regarding Claim 39, Rangachar discloses the telecommunications network of claim 30, wherein the first and second common command interfaces each comprise a central system including: a central command daemon. (see col. 6, lines 24-26: separate common command interfaces ; col. 4, lines 28-30: network manager (central command daemon))

5. Claims 6, 7, 8, 15, 21 - 25, 28, 29, 35 are rejected under 35 U.S.C. 103(a)

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as being unpatentable over **Rangachar-Chen** as applied to claims 1, 12, 18, 30 above, and further in view of **Kekic et al. (US 6,664,978)**.

Rangachar-Chen discloses a network management system controlling a plurality of managed network devices with a command interface. (see Rangachar col. 4, lines 7-11: “ ... *a network manager (sometimes referred to as a network server or a network management station) communicating with a plurality of ... switches connected by communications links ...* ”) (see Chen col. 1, lines 50-56: “ ... *UCI provides a command line interface for a network management platform including a parser that parses and validates inputs entered at a command line, a command processor that, responsive to validation of a command, causes an operation specified by the command to be performed, and an output facility that presents outputs of the command line interface ...* ”)

Regarding Claim 6, Rangachar-Chen does not specifically disclose an API interface for application development. However, **Kekic** discloses the method of claim 1, wherein completing execution of the command comprises:

- a) receiving the command through a command application programming interface (API) linked into the application; and calling a call back routine within the application corresponding to the received command. (see col. 72, lines 34-50: API interface exists for server network management system for application development)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar-Chen to enable an API

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interface for application development as taught by Kekic. One of ordinary skill in the art would be motivated to enhance Rangachar-Chen in order to enable a more flexible user interface for controlling network management devices. (see Kekic col. 5, lines 2-7: “... *efficiently manages a constantly changing and growing heterogeneous computer network. The solution of this invention, as described more completely below, is flexible, robust, secure ...*”)

Regarding Claims 7, 24, Rangachar does not disclose a display interface for responses to command. However, **Chen** discloses the method of claim 6, 21, wherein completing execution of the command further comprises: calling a display routine linked into the application to send any display data directly to the user interface. (see col. 10, lines 46-49: display commands and responses at command console)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable a display interface for display of command and responses for the network management system as taught by Chen. One of ordinary skill in the art would be motivated to enhance with Chen's in order to enable a flexible and robust user interface for network management control.

Regarding Claims 8, 15, 25, 35, Rangachar-Chen does not specifically disclose a web interface for the network management system. However, Kekic discloses

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the method of claim 1, 13, 18, 32, wherein the user interface comprises: a web interface. (see col. 8, lines 21-25: web type command interface for network management system)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar-Chen to utilize a web browser as the network management operator (user) interface as taught by Kekic. One of ordinary skill in the art would be motivated to enhance Rangachar-Char in order to enable a flexible and robust user interface for network management control.

Regarding Claim 21, Rangachar-Chen does not specifically disclose an API interface for application development. However, Kekic discloses the telecommunications network device of claim 18, wherein the application comprises: a command application programming interface (API) for registering the command with the common command interface and for responding to the command forwarded by the common command interface. (see col. 72, lines 34-50: API interface exists for server network management system for application development)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar-Chen to enable an API interface for application development as taught by Kekic. One of ordinary skill in the art would be motivated to adapt Kekic in order to enable a flexible and robust user interface for network management control.

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Regarding Claim 22, Rangachar discloses the telecommunications network device of claim 21, wherein the command API comprises:

- b) a command handler for responding to the command forwarded by the common command interface. (see col. 4, lines 18-25: network manager (command handler) processing commands)

Chen discloses :

- a) a registration routine for registering the command with the common command interface; (see col. 7, lines 55-59: store (register) commands within a command interface)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to store (register) a command for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated in order to provide more graphical and intuitive management of a NMS. (see Chen col. 1, lines 21-24)

Regarding Claim 23, Rangachar-Chen does not specifically disclose an API interface for application development. However, Kekic discloses the telecommunications network device of claim 22, wherein the application further comprises: a call back routine, wherein the command handler calls the call back routine when the command handler receives the command forwarded by the common command interface. (see col. 72, lines 34-50: API interface exists for server network management system for application development)

It would have been obvious to one of ordinary skill in the art at the time the

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invention was made to modify Rangachar-Chen to enable an API interface for application development as taught by Kekic. One of ordinary skill in the art would be motivated to enhance Rangachar-Chen in order to enable a flexible and robust user interface for network management control. (see Kekic col. 5, lines 2-7: "*... managed element server ... efficiently manages a constantly changing and growing heterogeneous computer network ... is flexible, robust, secure, collaborative ...*")

Regarding Claim 28, Chen discloses a telecommunications network device, comprising:

- a) a common command interface; (see col. 4, lines 28-30: network manager (command interface)) and

Rangachar-Chen does not specifically disclose an API interface for application development. However, Kekic discloses a telecommunications network device, comprising:

- b) an application capable of executing a command, wherein the application includes a command application programming interface (API) for registering the command with the common command interface. (see col. 72, lines 34-50: API interface exists for server network management system for application development)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar-Chen to enable an API interface for application development as taught by Kekic. One of ordinary

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skill in the art would be motivated to combine Kekic with Rangachar-Chen in order to enable a flexible and robust user interface for network management control. (see Kekic col. 5, lines 2-7: "*... managed element server ... efficiently manages a constantly changing and growing heterogeneous computer network ... is flexible, robust, secure, collaborative ...*")

Regarding Claim 29, Rangachar discloses the telecommunications network device of claim 28, wherein the command API includes a command handler and wherein the common command interface is capable of receiving the command from a user interface and forwarding the received command to the command handler. (see col. 4, lines 28-30: input commands are diverted to network manager (command interface) for network management system)

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung H Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 9 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KHS

Kyung H Shin
Patent Examiner
Art Unit 2143

KHS
Nov. 23, 2004

William C. Vaughn
Primary Examiner
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